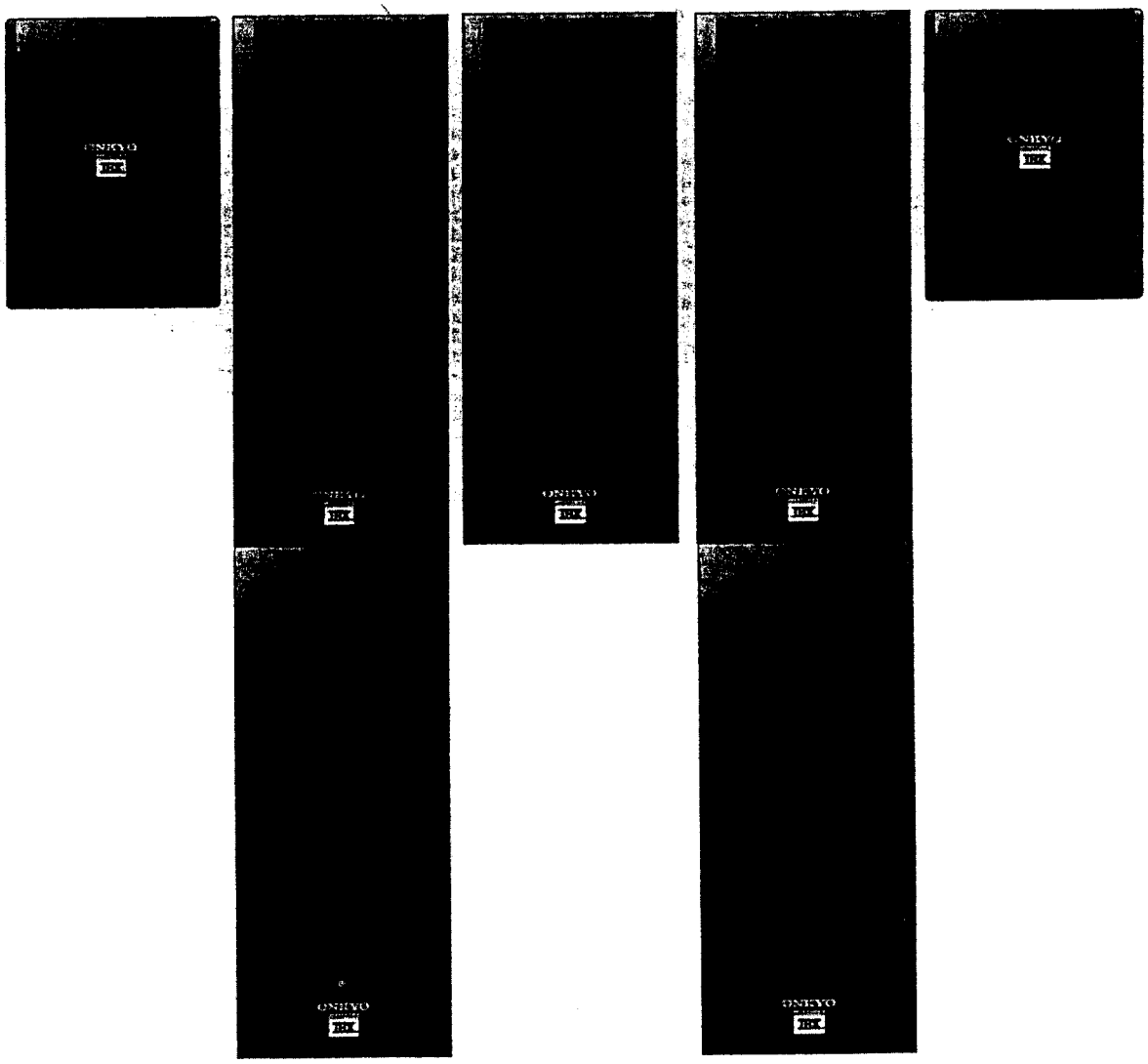
ONKYO®

THX® Set 1

THXF-1 · THXS-1 · THXPS-1A/THXPS-1P



USER'S GUIDE

Congratulations on your purchase of the ONKYO THX® Set 1!

Before you hook up your THX® speakers, please take the time to thoroughly read this manual as well as the section on speaker connection in the users manual for your ONKYO THX-receiver.

Keep your sales receipt in a secure place. It will be required to establish the date of purchase should you ever need warranty service to your THX® speakers.

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Important Safeguards and Speaker Maintenance Hints

Please do not expose your speakers to rain or moisture. Danger of electric shock!

Please do not open any electronic equipment.

Danger of electric shock!

There are no user serviceable components inside the equipment.

Please follow these maintenance hints to ensure that you will enjoy years of trouble-free operation from your speakers.

1. Do not place the speakers close to any source of heat. Avoid also direct sunlight on the boxes.

2. Speakers with built in amplifiers generate heat during operation. Adequate ventilation is required to avoid overheating and subsequent damage to the equipment (please ensure that ventilation openings and metallic heat-sinks are not covered or air flow around them otherwise obstructed). In particular, if you install the equipment inside a cabinet, forced ventilation may have to be provided.

3. Do not expose the speakers to dust or moisture.

4. Prevent spilling of liquids on or into the speakers, and ensure that no objects are inserted into any openings.

5. Vibrations can be transmitted from the speaker to equipment placed on top of the enclosure. Therefore do not place any equipment, such as amplifiers, CD players, etc., on top of any speaker box.

6. Please refer to your ONKYO service in case any adjustments or cleaning of inside components should become necessary.

7. Power cords (for speakers with built in amplifiers) should be routed in such a way that they are not being jammed anywhere or bent sharply. The power cord should not be taut, and the plug should be placed in the wall outlet in a straight manner and free of mechanical tension. Please use only safety-approved plugs and cords.

8. Please refer in the following cases to your ONKYO service:

   a. if speakers have been exposed to excessive moisture;
   b. if liquids or any objects have been introduced into a speaker;
   c. if there is a noticeable degradation of performance;
   d. if someone has dropped a speaker box or damaged the enclosure;
   e. if, in the case of speakers with built in power amplifiers, the power cord or plug have been damaged in any way.

9. From time to time carefully wipe the surfaces with a soft cloth. Spots may be removed with a little bit of water and soap. Dry any wet spots quickly with a clean cloth. Avoid abrasives and solvents such as furniture polish, alcohol or paint thinner. These substances may permanently damage the finish. Please ensure power has been diconnected before you clean your speakers.

10. To dust your speakers only use a soft cloth or brush or a small vacuum cleaner.

11. Otherwise leave maintenance to qualified service personnel. Note that any tampering with hi-fi equipment generally voids the warranty.

Unpacking your Speakers

Inspect each shipping carton for damage. Contact your ONKYO dealer if you suspect any damage to the contents of a carton.

Carefully remove the speakers from their shipping cartons. You can facilitate unpacking by carefully opening the top of each carton and spreading the cardboard flaps. Then turn the whole carton upside down and gently pull on the sides of the box. The speaker should slide out.

Turn it upright and remove the plastic wrapping. If possible, save the shipping cartons for future use.

If, after unpacking, you discover any damage to a speaker enclosure, immediately contact your ONKYO dealer.

Speaker Placement

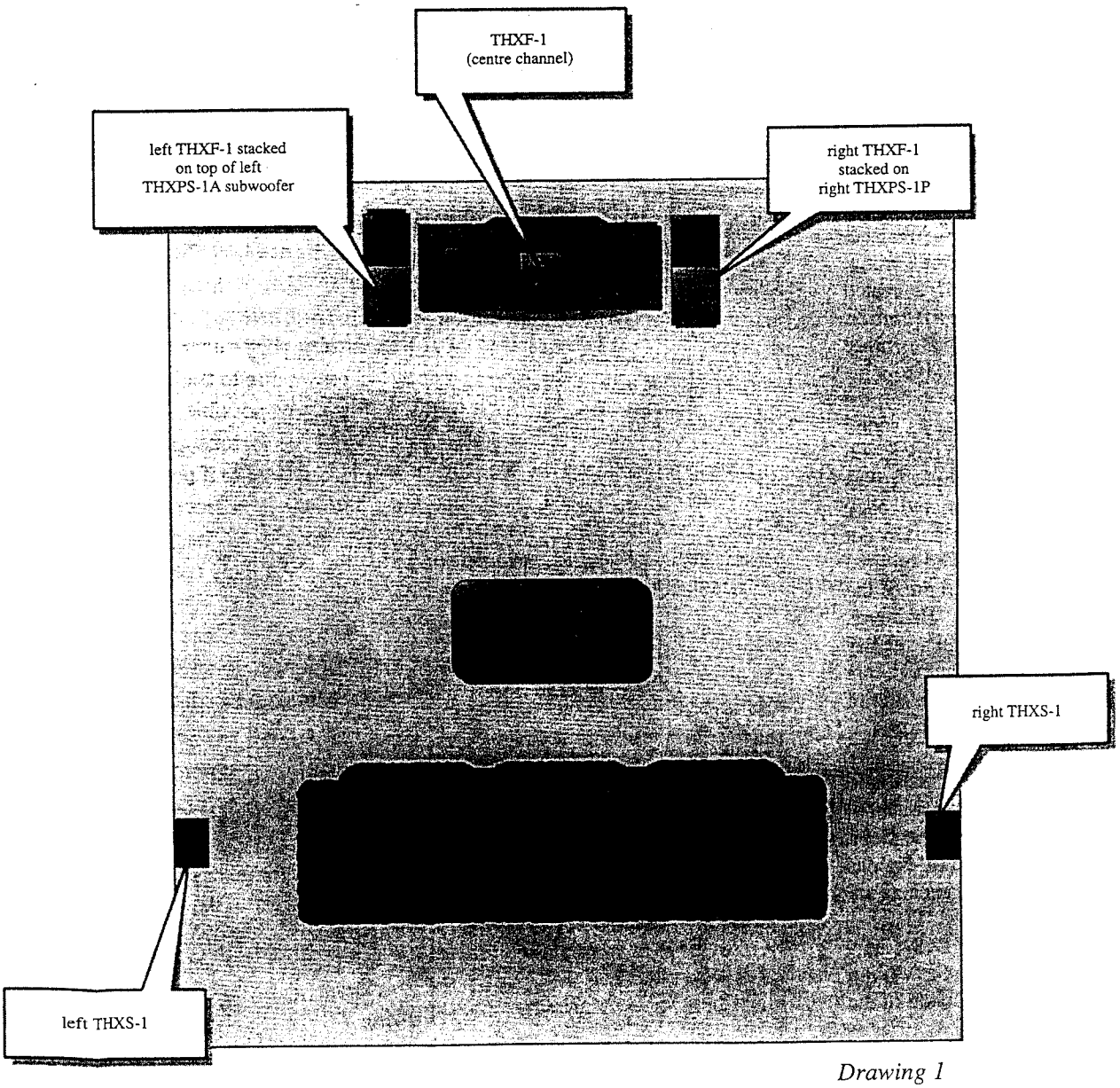
Where you position your speakers is one of the most important factors in achieving correct Home THX® performance.

Lucasfilm THX carefully researched the optimal position for each set of speakers in order to best recreate a motion picture sound track.

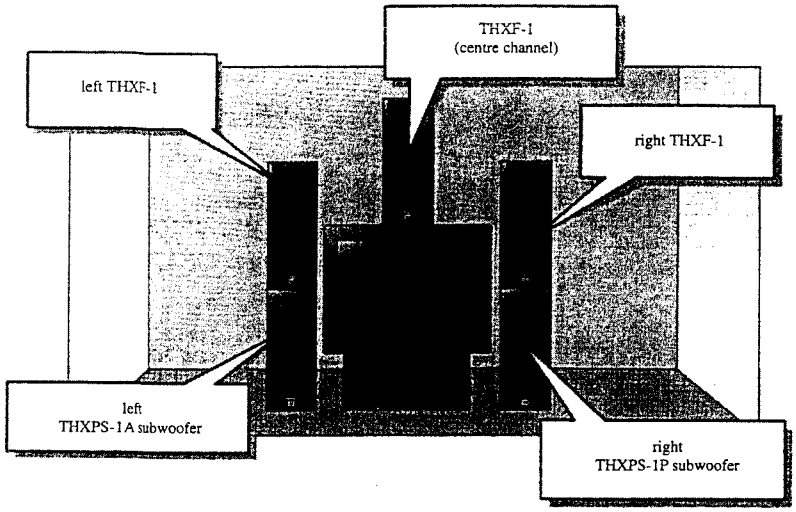
Because Home THX® speaker designs ar optimized for multichannel sound reproduction, a few rules should be followed to get the best performance from your home theatre.

Drawing 1 below shows the recommended position for your THXF-1, THXS-1 and THXPS-1 speakers. *Drawings 2 and 3* on the next page show two other options for positioning your THXPS-1 subwoofers. The effects of various subwoofer placements are covered in depth in the separate THXPS-1 User's Guide.

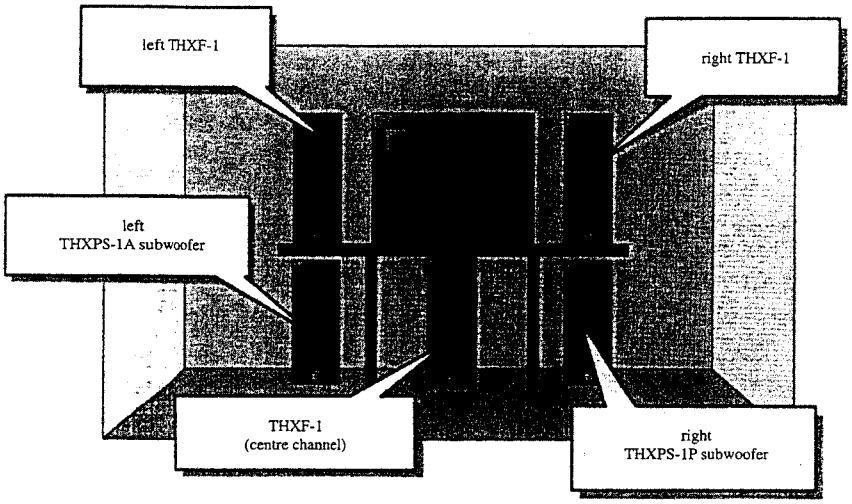
Naturally, your room size and furniture position will vary, but the following rules MUST be observed to achieve correct Home THX® performance:



Drawing 1



Drawing 4



Drawing 5

Connecting your Speakers

Speaker Wire

After you have placed your ONKYO Home THX® speakers, measure the distances from your surround sound electronics to each speaker. Make sure to allow for concealment of wire around the perimeters of the room and other detours that will add to the overall lengths. You will need a total of six lenghts of speaker cable or wire:
three for the front THXF-1s, two for the side THXS-1 surround speakers (these will be your longest lengths), and one to connect the THXPS-1P passive subwoofer with the THXPS-1A active (powered) subwoofer.

The size of speaker wire used to connect your system is of sufficient importance that official home THX® specifications include minimum wire gauges for various distances between amplifier and speakers.

The easiest way to be sure you are using thick enough wire is to obtain quality speaker cable from your ONKYO dealer. There are a number of quality products on the market today that offer obvious sonic benefits over generic lamp cord. Your dealer can terminate individual lengths of speaker cable with gold-plated plugs (pin, spade lug or banana plug) that will insure positive, nonoxidizing electrical contact with your THXF-1 and THXS-1's gold-plated binding posts.If you choose to use lamp cord, also called zip cord, make sure that you use the right gauge (thickness).

If you use copper wire, the following wire sizes will always meet or exceed the THX® standard:

Length of wire	Diameter of wire
30 ft or less	1/12"
30 to 75 ft	1/8"

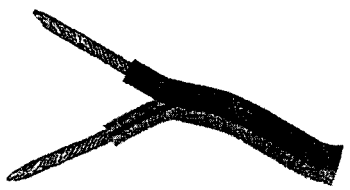
Preparing Speaker Wire

If you are using pre-terminated cable, you can skip this section.

1. If you're using lamp cord or unterminated speaker cable, separate the two conductors for a distance of about one inch.

2. Strip 3/8" of insulation from both ends of each conductor using a wire stripper, diagonal pliers or a knife.

3. Twist each set of thin wires into a tightly-bunched spiral so that no individual strands protrude. When you're through, you should have stripped and twisted twenty-four wire ends.



Determining Polarity

It is very important that each pair of Home THX® speakers is connected to your amplifiers or ONKYO THX-receiver the same way.

In other words, the red (+) speaker terminals on the amplifier should be connected to the red (+) binding posts on the speakers; the black speaker terminals (-) should connect to black (-) binding posts. To do this, you need to be able to differentiate the two conductors at each end of your speaker wire.

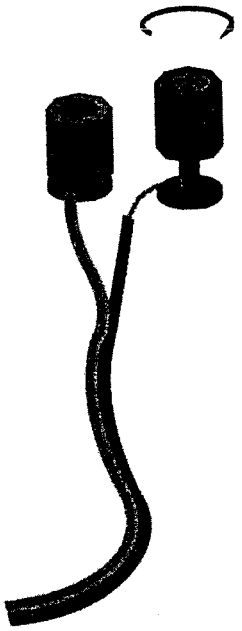
If you're using quality speaker cable, it will be very clearly marked. But even common lamp cord is polarity coded. The positive (+) side may be different color (copper or silver), have a thin white stripe or a series of thin ridges on the insulation, or a single strand of yam in with the individual strands. When you have learned to tell the two conductors apart, you're ready to begin actual connections.

Speaker hookup: THXF-1 and THXS-1

1. Make sure that your amplifier(s) or ONKYO THX-A/V-receiver is turned off.

Refer to *drawing 7* on the next page.

2. Unscrew the binding posts on the back of the left and right channel THXF-1 speakers. Insert the wires into the binding post holes. If you are using pin connectors, they can be inserted into the holes in each binding post. Banana plugs can be plugged directly into the tops of the binding posts. Connect the positive (+) wire to the RED binding post and the negative (-) wire to the BLACK binding post.



Drawing 6

3. After the wire or connector has been attached, securely tighten both binding posts on each speaker.

4. Connect the other ends of these two wires to the L (left) and R (right) FRONT SPEAKERS A on your ONKYO THX-receiver (see *drawing 7* on the next page). Take care to connect the positive (+) wires to the RED (+) binding posts and the negative wires (-) to the BLACK (-) binding posts. Also make sure that the speaker cable from the LEFT THXF-1 is connected to the LEFT set of binding posts and the RIGHT THXF-1 is attached to the RIGHT set of binding posts.

5. Attach a speaker wire to the centre channel THXF-1 (remember, the "+" conductor connects to the RED binding post and the "-" conductor to the BLACK binding post).

6. Connect the other end of this wire to the CENTRE SPEAKERS A terminals on the ONKYO THX-receiver.

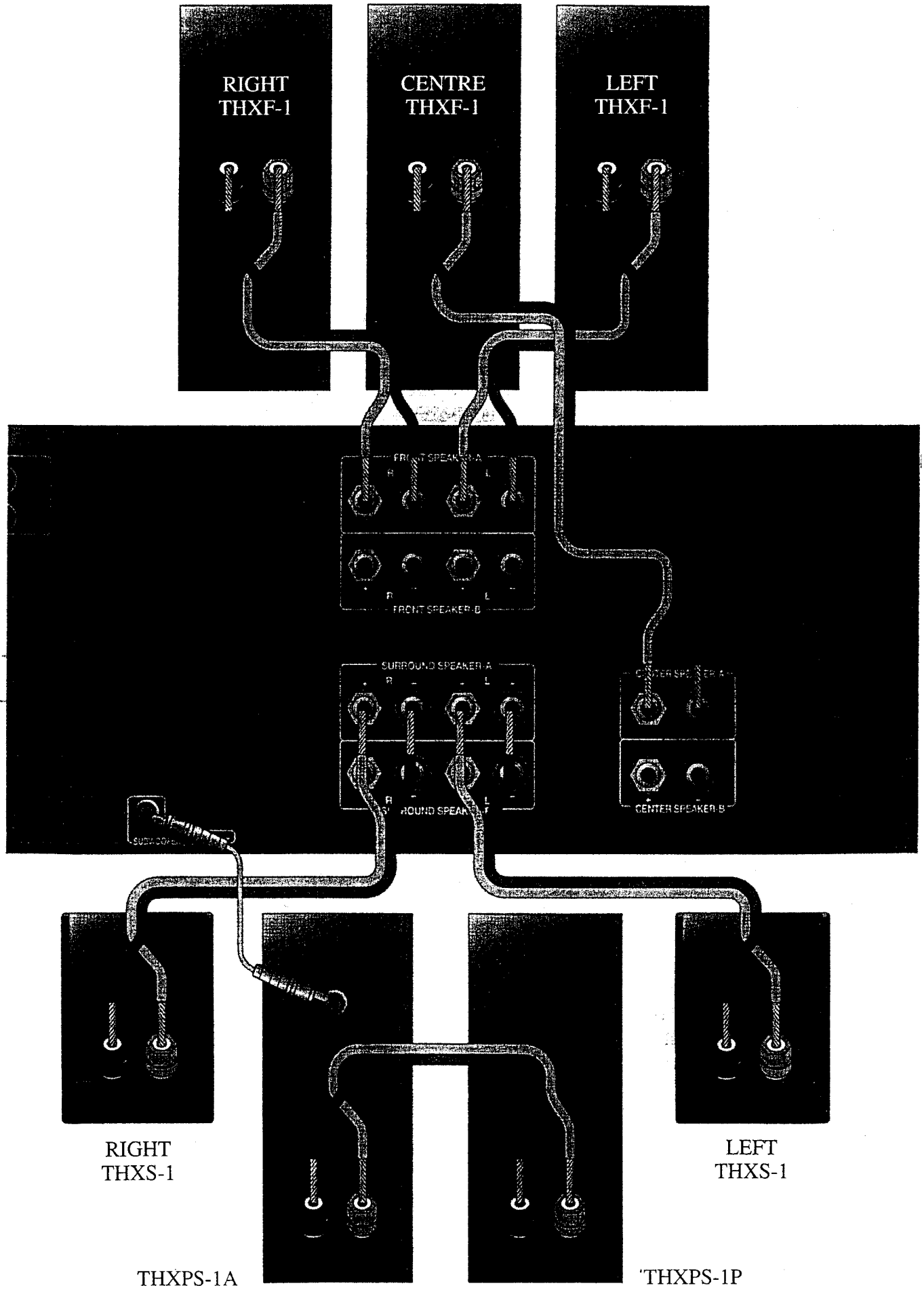
7. Attach speaker wires to the binding posts of the right and left side wall THXS-1 surround speakers.

8. Hook the other end of these wires to the corresponding R (right) and L (left) SURROUND SPEAKERS A binding posts on your ONKYO THX-receiver.

9. Although it may seem very repetitive, double-check all your connections. If you're using unterminated wire, make sure that no loose strands have crossconnected themselves to the opposite binding post. Even one tiny strand can cause the protection circuits in your ONKYO THX-receiver to trigger.

Subwoofer hookup: THXPS-1A and THXPS-1P

The THXPS-1A active subwoofer contains its own power amplifier. It receives input signals from the ONKYO THX-receiver via a standard stereo connection cable (interconnect) - the kind you use to hook cassette decks and CD players to your receiver. (The THXPS-1A's internal amplifier is then used to power the passive THXPS-1P via normal speaker wire.)


RIGHT
THXF-1
CENTRE
THXF-1
LEFT
THXF-1
FRONT SPEAKER-B
SURROUND SPEAKER-A
CENTER SPEAKER-B
RIGHT
THXS-1
LEFT
THXS-1
THXPS-1A
THXPS-1P

Drawing 7

Just as there are different grades of speaker cable, there are substandard, standard and high quality interconnects. Name brand connection cables have thicker conductors, sturdier termination and gold-plating to maximize electrical contact. Consult your ONKYO dealer for more information about how high quality interconnects can benefit your entire Home THX® system.

1. Make sure that the THXPS-1A's power cord is unplugged.

2. Plug one end of an interconnect cable into the "RCA-type" INPUT socket on the back of the THXPS-1A.

NOTE: Do not use an interconnect cable longer than 25 feet. This won't generally be an issue unless you have chosen to place the THXPS-1A a long distance away from the ONKYO THX-receiver.

3. Plug the other end of the cable into the socket marked SUB-WOOFER (ACTIVE) OUT on the back of the ONKYO THX-receiver.

4. Attach a length of speaker wire to the OUTPUT binding posts on the back of the THXPS-1A.

5. Hook the other end to the binding posts on the THXPS-1P. As with your front and surround Home 1 THX®-speakers, the "+" wire conductors connect to the RED binding posts and the "-" conductors to the BLACK binding posts.

6. After double-checking your connections, plug the THXPS-1P's line cord into a wall outlet. The THXPS-1A's plug has one blade that is wider than the other. It fits into polarized sockets one way and one way only. If you have trouble inserting the line cord plug into a wall socket, the outlet may not be polarized. We suggest that you contact a qualified electrician who can install a modern, polarized outlet.

The THXPS-1A is an electrical appliance. We recommend that you read the Important Safeguards section on the inside cover of this Guide before operating the Home THX® speaker system.

Optimising Bass Response: Subwoofer Phase Correction

When both the THXPS-1A and THXPS-1P are near each other, their woofers work together. As the two parts of the subwoofer system are placed farther apart, the situation can change. Due to the large size of low frequency sound waves, the two subwoofers can actually begin to cancel each other out. The THXPS-1A's two-position PHASE switch reverses the operation of one of the two woofers. At various distances (depending on the configuration of your room and placement of the subwoofers), this allows the two speaker to again work together.

1. With your ONKYO THX-receiver turned off, set the THXPS-1A's PHASE switch to NOR (normal).

2. Turn on the receiver and play music or a movie that has lots of deep bass. Have someone sit in the main viewing position and listen to the amount and quality of bass.

3. Turn the receiver DOWN.

4. Flip the THXPS-1A's PHASE switch to REV (reverse) and turn the volume control back up.

The listener will hear an audible change in the quality of the low bass (either more or less). Leave the PHASE switch in the position where the bass sounds fullest.

Note: When experimenting with the THXPS-1A PHASE switch, always turn your receiver volume down before changing between NOR and REV settings.

Protective Measures

The power recommendation for the THXF-1 and THXS-1 speakers corresponds to the respective channel output rating of the ONKYO THX-receiver: 100 watts per channel for THXF-1 and 50 watts for THXS-1. These power ratings meet Home THX® specifications and, in a normall-sized viewing room, allow you to listen to movie sound tracks at levels comparable to those in a THX movie theatre.

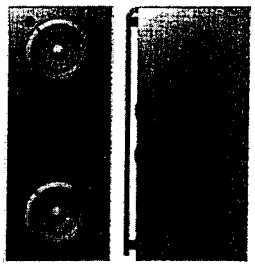
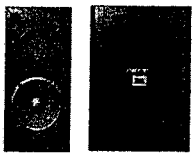
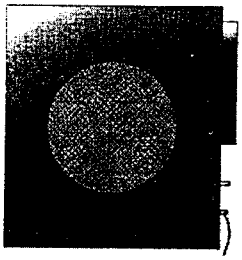
However, the acoustic properties of a complex audio signal, such as a movie soundtrack, cannot be expressed simply by power handling ratings. In other words, depending on what you are listening to, it is still possible to turn up the ONKYO THX-receiver's volume control to a level that causes distortion (clipping). Clipped signals are extremely dangerous to your speakers, especially the tweeters, which can be irreparably damaged quite quickly. Take extreme care not to turn the volume too high!

It is in general good practice to drive speakers with amplifiers of an appropriate power rating. Underpowered amplifiers tend to clip the signal long before it becomes too loud and thus present a high risk to your speakers.

Important:

Damage to your speakers specifically caused by distorted (clipped) signals can be recognized by trained technicians and is not covered by your product warranty!

Specifications

	 THXF-1	 THXS-1	 THXPS-1A	THXPS-1P
Type	2-way acoustic suspension	2-way dipolar acoustic suspension	acoustic suspension with built-in power amplifier	acoustic suspension
Tweeter	2.5 cm (1″) BRaDD titanium dome x 2	2.5 cm (1″) BRaDD titanium dome x 2	–	–
Woofer	12 cm (4.75″) Bio-Hybrid cone x 2	12 cm (4.75″) Bio-Hybrid cone x 2	25 cm (10″) Bio-Hybrid cone x 1	25 cm (10″) Bio-Hybrid cone x 1
Frequency Response	80 to 20,000 Hz +/- 3 dB	125 to 20,000 Hz +/- 3 dB	30 to 200 Hz +/- 3 dB	30 to 200 Hz +/- 3 dB
Crossover Frequency	2500 Hz	2500 Hz	–	–
Sensitivity	87 dB/2.8 V @ 1 m	83 dB/2.8 V @ 1 m	88 dB/100 mV @ 1 m	88 dB/100 mV @ 1 m
Nominal Impedance	6 Ω	6 Ω	>20 kΩ	10 Ω
Dimensions (H x W x D)	20 1/16″ x 8 5/8″ x 10 7/16″ (510 x 220 x 265 mm)	11″ x 8 5/8″ x 6″ (280 x 220 x 152 mm)	20 1/16″ x 8 5/8″ x 21″ (510 x 220 x 533 mm)	20 1/16″ x 8 5/8″ x 19 13/16″ (510 x 220 x 503 mm)
Weight	20.7 lbs (9.4 kg)	11.2 lbs (5.1 kg)	45.5 lbs (20.7 kg)	37.8 lbs (17.2 kg)